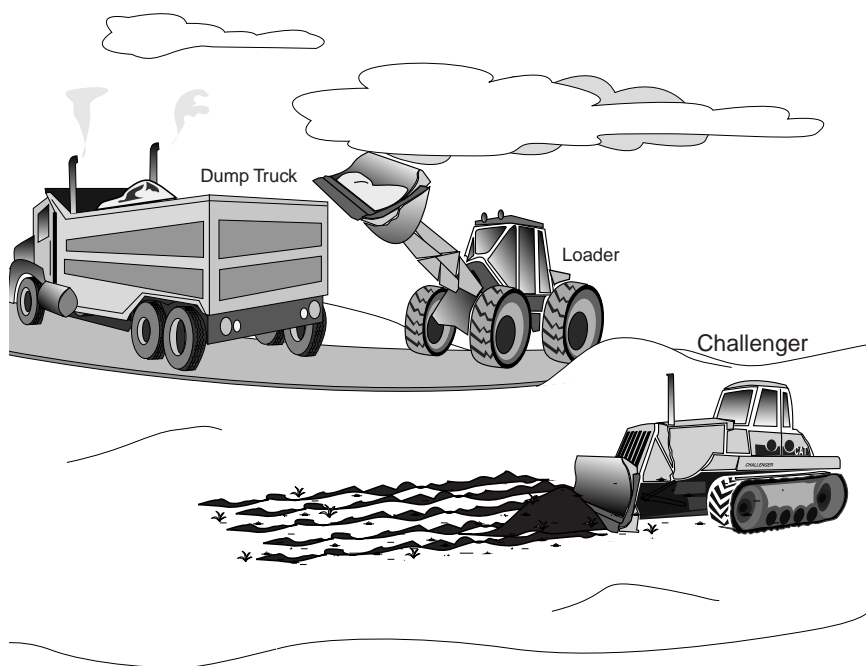


## Scraping

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Scraping the top 1 to 3 inches of surface contamination while the ground is frozen will reduce total contaminant levels on site. This tactic removes contaminated material while preserving some of the live roots, rhizomes, and stem bases of plants to allow for resprouting.

Using a tracked dozer, Bobcat or front-end loader, clear the area of snow (Tactic T-10) to expose tundra surface. Adjust the blade to remove the top 1 to 3 inches of vegetation. Pick up scraped vegetation manually or with the front-end loader. Transfer contaminated material to dump trucks on nearby roads and transport to appropriate waste disposal facilities.

### APPLICABILITY

	APPLICABILITY	COMMENTS
SPILLED SUBSTANCE	All	<ul style="list-style-type: none"> <li>Most applicable for viscous substances such as crude oil which will tend to be concentrated on the tundra surface.</li> </ul>
TUNDRA TYPE	All	<ul style="list-style-type: none"> <li>May not be practical for areas with topographical relief (e.g., tussock tundra, patterned ground).</li> </ul>
SEASON	Winter	<ul style="list-style-type: none"> <li>Only applicable when ground is frozen.</li> </ul>

### CONSIDERATIONS AND LIMITATIONS

- The goal of scraping is to remove heavily contaminated surface vegetation without impacting root mat or organic soils.
- Stockpiling snow on contaminated areas should be avoided. Snow piles will persist into the growing season.
- Use of vehicles and heavy equipment on tundra must comply with applicable tundra travel policies (Tactic P-5).
- Scraping has been used to treat crude-oil-affected moist and wet tundra on the North Slope with acceptable short-term results (Jorgenson and Cater, 1992; Cater and Jorgenson, 1995). Information on the effectiveness of this tactic is based on field observations, not controlled experiments. No test data exist which document whether the use of this tactic results in long-term benefits to tundra restoration compared with other tactics, combinations of tactics, or “no action.”

### EQUIPMENT, MATERIALS, AND PERSONNEL

- Challenger dozer/ Bobcat (1 operator) – to scrape snow and contaminated surface vegetation.
- Front-end loader (1 operator) – to transfer scraped material into end dumps.
- Dump truck (1 operator) – to transfer scraped material to disposal site.
- Rakes and shovels (1 operator per tool) – to recover scraped material.